

AMENDMENTS TO THE SPECIFICATION:

Page 2, amend the paragraph beginning at line 14 as follows:

- it offers the half-open roof components a significant wind catch which tends to destabilise them,

Page 2, amend the paragraph beginning at line 16 as follows:

- it takes a relatively long time to install and, or uninstall for several roof components,

Page 2, amend the paragraph beginning at line 25 as follows:

Despite these different innovations allowing the transfer of the roof components from a closed position to a half-open position to be substantially improved by sparing the user as far as possible the efforts to be exerted during this operation, the applicant has noted that opening the roof components constituting the swimming pool roof still remained a difficult handling operation, although simplified by the very fact of the weight of said roof components. This handling even becomes a real difficulty when the swimming pool and therefore the roof components covering it are of large dimensions or it is necessary to raise a number of them.

Page 5, amend the paragraph beginning at line 11 as follows:

Additionally, the fact of associating several roof components one behind the other and of making them mobile along the pool in the form of a train by means of running gear provided on the two longitudinal parallel edges of each roofing element which will slide by running on the longitudinal edges of the pool, allows, by associating with them at least one motor-drive roller which, when judiciously placed at the input of the aforementioned storage means and being supported on the aforementioned roof component train, will be able to make them run automatically in a direction outwards from the pool in the direction of the storage area of said storage means in order to

expose the pool which they were covering and to store them in the storage area in a stacked way and, in the other direction, inwards to the pool so as to discharge them from the storage area and to make them run in the form of a train of juxtaposed roof components to conceal the pool opening.

Page 8, amend the paragraph beginning at line 20 as follows:

As can be seen in the drawing in figure 2, one (the central one) of the roof components I is shown in the half-open position thus allowing the pool to be partially exposed. To this end, one (220a) of the two longitudinal edges of the frame of this roof component is released from its fixing lugs 300a thus allowing said roof component I a tilting movement on its second edge 220b around the two fixing lugs 300b, according to an angular expansion (symbolised by the arrow A) in a plane transverse to the pool. The roof component I is held in this half-open position by means of two struts formed by props 400 the heads 410 of which enter each end of the edge 220a and the feet 420 of which are supported on the longitudinal edges S of the pool in which they are anchored in place and instead of the fixing lugs 300a which have just been released.

Page 9, amend the paragraph beginning at line 5 as follows:

The drawings in figures 3, 4, 5 and 6 show a new swimming pool roof concept with now four (this number of four is given only as an illustrative example and to clarify the drawings) roof components I of the low profile cover type articulated like those shown in the drawings in figures 1 and 2 but fitted with the device of the invention allowing the pool opening to be exposed and/or concealed without any handling operation of installation, removing or transporting said roof components I.

Page 9, amend the paragraph beginning at line 14 as follows:

To this end, the device of the invention includes a set of means which, when judiciously combined together, are responsible in an autonomous way for displacing and stowing the roof components I allowing the pool opening to be exposed (cf. figure 6) and/or concealed (cf. figure 3), without any manual intervention.

Page 10, amend the paragraph beginning at line 1 as follows:

- on the one hand, of running gear 710a (shown in more detail in the drawing in figure 7) and which, distributed over the width of the two parallel longitudinal edges 220a and 220b of each roof component I, ensure the free displacement (arrow H) of the edges 220a and 220b along the edge S, and therefore of the whole of the roof component I associated with it,

Page 10, amend the paragraph beginning at line 8 as follows:

- and on the other hand, by at least one 720a (as shown in the drawing in figure 7,) but preferably two motor-drive rollers which, placed at the input of said storage means 600, are supported on the roof component I present in front of them so as to make it run either in the direction of the arrow H to make it completely enter (cf. figure 4) the storage area of the storage means 600 so as to disengage it from the pool which it was covering and to store it in the storage area 600 in a stacked way or, in the other reverse direction to that of the arrow H, inwards towards the pool, so as to discharge it from the storage area 600 by pushing the other roof components I which, in the form of a train of juxtaposed roof components will gradually cover the pool opening.

Page 10, amend the paragraph beginning at line 22 as follows:

Thus, the two longitudinal edges 220a and 220b of the roof components I rest of the edge of the pool S via the running gear 710a allowing, once the fixing lugs 300a and 300b have been released from their anchoring in the aforementioned support edge S, the roof components I (arrow H) to be freely displaced towards the storage area 600 of the storage means. This evolution (arrow H) of the roof components I from an intermediate position shown in figure 4 to a more advanced position shown in figure 6, allows the pool to be gradually exposed at one of its ends. Although not shown, it should be noted that the roof component train I will be displaced (arrow H) along the support edge S but outwards from the pool fully stacked in the storage area 600, so as to fully expose the pool.

Page 11, amend the paragraph beginning at line 11 as follows:

According to one particular adaptation of the invention, the two motor-drive rollers (only one of which 720a is shown in the drawing in figure 7) ensuring the horizontal displacements (arrow H) of the roof components, have their axes of rotation 721a placed substantially inclined relative to the vertical and inwards towards the pool in such a way that the treads 723a of said motor rollers are supported on the longitudinal edges 220a and 220b of the roof components I while guiding said roof components I in the storage area 600.

Page 11, amend the paragraph beginning at line 25 as follows:

- on the one hand, of said running gear 710a and which, distributed over the width of the two parallel longitudinal edges 220a and 220b of each roof component I, ensure the free displacement (arrow H) of the edges 220a and 220b along the edge S, and therefore of the whole of the roof component I associated with it,

Page 12, amend the paragraph beginning at line 1 as follows:

- and on the other hand, by at least one translation mobilisation means 730a of the pinion 731a/rack 732a type. The pinion 731a is drawn into rotation by a fixed geared motor unit and the rack 732a is as shown integral with the longitudinal edge of the roof component. According to the embodiment shown, the rack 732a is integrated with the lateral edges. These pinions, of which only 731a is shown, are placed at the input of said storage means 600. They become enmeshed with the racks integral with the roof component I present in front of them so as to make it run according to their direction of rotation either in the direction of the arrow H in order to make it completely enter (cf. figure 4) the storage area 600 in order to disengage it from the pool which it was covering and to store it in the storage area 600 a stacked way or, in the other direction reverse to that of the arrow H, inwards towards the pool so as to discharge it from the storage area 600 by pushing the other roof components I which, in the form of a train of juxtaposed roof components, will gradually cover the pool opening.

Page 13, amend the paragraph beginning at line 5 as follows:

- on the one hand, of said running gear 710a (shown in more detail in the drawing in figure 7) and which, distributed over the width of the two parallel longitudinal edges 220a and 220b of each roof component I, ensure the free displacement (arrow H) of the edges 220a and 220b along the edge S, and therefore of the whole of the roof component I associated with it,

Page 13, amend the paragraph beginning at line 12 as follows:

- and on the other hand, by at least one but preferably two horizontal motor endless strips 740a and 740b, which, placed at the input of the aforementioned storage means 600, engage with the roof component I present in front of them so as to make it run either in the direction of the arrow H to make it completely enter the storage area of the storage means 600 so as to disengage it from the pool which it was covering and to store it in the storage area 600 in a stacked way or, in the other direction reverse to that of the arrow H, inwards towards the pool so as to discharge it from the storage area 600 by pushing the other roof components I which, in the form of a train of juxtaposed roof components, will gradually cover the pool opening.

Page 14, amend the paragraph beginning at line 3 as follows:

The function of the third means 800 (shown in figures 8 and 9) the so-called stowing means is to stow the roof components I in the storage area 600 and in a stacked position, under the effect of the horizontal displacement (arrow H) of the roof components I by the motor-drive rollers 720a.

Page 14, amend the paragraph beginning at line 9 as follows:

According to one particularly advantageous characteristic of the invention as shown in figures 8, 9 and 11a, 11b, 11c, these stowing means 800 are, to this end, constituted by a support frame acting as a framework for logic structure to at least two conveyors 810a and 810b which, placed in the storage area 600 on either side of the stack of stacked up roof components I, are able to grip and vertically displace (arrow V),

in the storage area 600, each roof component I in an upward movement so as to store them stacked one on top of the other but by feeding them one underneath the other and in a downward movement (reverse to that of the arrow V) so as to lay them on the longitudinal edges of the pool in order to juxtapose them one next to the other. These two conveyors 810a and 810b are each constituted by an endless strip drawn in rotation (arrows R) around two return cylinders not shown in the upper and lower part of the conveyors 810a and 810b and one of which is a drive cylinder to drive the endless strip around said cylinders.

Page 14, amend the paragraph beginning at line 28 as follows:

According to a first embodiment and in accordance with the invention, the two endless strips 810a and 810b are provided over their widths with at least one chain of gripping mechanisms 811a and 811b placed opposite each other for each endless strip 810a and 810b so as to engage simultaneously (as can be seen in the drawing in figures 8 and 9) with the two longitudinal parallel edges 220a and 220b of each roof component I which is presented between them in the storage area 600. These gripping mechanisms 811a and 811b are, according to an embodiment of the invention shown in more detail in the drawing in figure 7, embodied in hooks which are, on the one hand, evenly spaced out by a pitch "p" one from the other, and, on the other hand, adapted so as to engage with corresponding fastening means 221a (for example hooks turned downwards) on the longitudinal parallel edges 220a and 220b of the roof components I through the rotation (arrow R) of the endless strips 810a and 810b which ensure a linear vertical displacement (arrow V) of the hooks 811a and 811b associated with it over the rectilinear portion of said strips. Thus, by activating with a pitch "p" the pitch-by-pitch displacement of the endless strips 810a and 810b in the direction of the arrow V and corresponding to the spacing pitch "p" of two hooks 811a or 811b on one and the same chain, these are engaged at the beginning of the displacement pitch with the lateral edges 220a and 220b of the roof component I, equipped to this effect with said appropriate means fastening to the hooks 811a and 811b, so as to lift them subsequently above the storage area 600 by a pitch "p", in such a way that said roof

component I and the previous ones which have been hooked in the same way by the previous hooks are stored in a stacked away in the storage area 600 as they are admitted to it. The pitch-by-pitch movement reverse to that of the arrow R of the endless strips 810a and 810b will provide the descent (reverse direction to that of the arrow V) for the purpose of discharging the roof components I from the storage area 600.

Page 16, amend the paragraph beginning at line 6 as follows:

According to another embodiment shown in figures 11a, 11b and 11c, the two endless strips 810a and 810b are provided over their widths with gripping mechanisms 811a and 811b placed opposite each other for each endless strip 810a and 810b so as to engage simultaneously (as can be seen in the drawing in figures 11a, 11b and 11c) with the two longitudinal parallel edges 220a and 220b of each roof component I which is presented between them in the storage area 600. Apart from the fact that they are not configured in a chain as for the first embodiment, these gripping mechanisms 811a and 811b are, according to an embodiment of the invention shown in more detail in the drawing in figure 7, embodied in hooks which are adapted to engage with corresponding fastening means 221a (for example hooks turned downwards) on the parallel longitudinal edges 220a and 220b of the roof components I through the rotation (arrow R) of the endless strips 810a and 810b which provide a vertical linear displacement (arrow V) of the hooks 811a and 811b associated with it over the rectilinear portion of said strips. Thus, by activating the displacement of the endless strips 810a and 810b in the direction of the arrow V, these are engaged with the lateral edges 220a and 220b of the roof component I, equipped to this end with said appropriate means of fastening to the hooks 811a and 811b, so as to lift them subsequently above the storage area 600, so that said roof component I comes to rest on fixed bearing surfaces 820a and 820b with the previous roof components which have been brought in the same way by the previous movements of the hooks and in such a way that they are stored in a stacked away on said bearing surfaces 820a and 820b above the storage area 600 as they are admitted to it.

Page 17, amend the paragraph beginning at line 17 as follows:

It is conceivable to equip the lower ends of the endless strips 810a and 810b with strip guide means not shown which, by giving an angle of inclination to said hooks will improve their fastening and/or their unfastening with the longitudinal edges 200a and 220b of the roof components I at the low points of the conveyors 810a and 810b.

Page 17, amend the paragraph beginning at line 23 as follows:

According to another particularly advantageous characteristic of the invention and as shown in the drawings in figures 12, 13a, 13b, 13c and 13d, the aforementioned stowing means 800 are constituted by a support frame acting as a framework for logic structure to at least two elevators, of which only 830a is shown, which, placed in the storage area 600 on either side of the stack of stacked up roof components I, are able to grip and vertically displace (arrow V), in the storage area 600, each roof component I in an upward movement in order to store them stacked one on top of the other by feeding them one under the other and in a downward movement (the reverse of that of the arrow V) to lay them and place them on the longitudinal edges of the pool so as to juxtapose them one next to the other.

Page 20, amend the paragraph beginning at line 8 as follows:

According to another particularly advantageous characteristic and as shown in the figures 14a, 14b, 14c, 15a, 15b, 15c, 15d, these stowing means 800 are constituted by two ramps 840a and 840b which, placed in the storage area 600 on either side of the stack of stacked up roof components I, are able to vertically displace (arrow V), in the storage area 600, each roof component I in an upward movement to store them stacked up one on top of the other by means of a displacement of said roof components on the ramps by feeding them one underneath the other and in a downward movement (the reverse of that of the arrow V) so as to juxtapose them one next to the other. These two ramps 840a and 840b engage with pins projecting externally from the roof components (I) so as to make said roof components effect an

upward movement and tilt as shown in figures 15 such that the stored roof components form an open angle opposite those coming to be supported on their lower surface.

According to a preferred embodiment, said pins coming to be supported on said ramps 840a and 840b are those 230a and 230b gripping said mobility means 740a and 740b.

Page 21, amend the paragraph beginning at line 4 as follows:

With regard to the fourth means 900, i.e. the means of connecting the roof components I to each other, they have been provided indissociable on the one hand so as to secure them to each other to form the roof component train I able, under the effect of the motor-drive rollers 720a of the mobility means, to be displaced in a horizontal linear movement (arrow H) along said pool, and dissociable one from the other on the other hand, so that said roof components I on entering the storage area 600 are able, under the effect of the rotation (arrow R) of the endless conveyors 810a and 810b and the hooks 811a and 811b subjected to them, to be displaced in a vertical linear movement (arrow V) causing their disassociation and their superposition in the storage area 600. Thus, the connection means 900 are such that, when the roof components I evolve in a horizontal linear movement of thrust or pulling (arrow H), they are indissociable so as to keep the roof components secured to each other and to form a roof component train, and when a roof component I enters the storage area 600 (cf. figure 4) under the effect of the thrust of the roof component train I, they become dissociable to allow stacking by admission from underneath of the others of the roof components in the storage area 600.

Page 21, amend the paragraph beginning at line 26 as follows:

As shown here, the connection means 900 of the roof components I are also dissociable from each other on the one hand, to allow the roof components I (arrow A in figure 2) to articulate freely relative to the support edge S of the pool and indissociable on the other hand, to push in the direction of the arrow H, but also to bring back in the direction reverse from that of arrow H, all the roof components I secured to each other such that the presence of the motor-drive rollers 720a at the input of the storage area

600 is enough to draw outwards from the pool (in the direction of the arrow H) or to push inwards towards the pool (in the direction reverse to that of the arrow H) all the roof components I so as to allow the exposed position or the concealed position of the pool respectively.

Page 22, amend the paragraph beginning at line 10 as follows:

An electronic automatic control system for the motors driving the drive rollers 720a and the motor cylinders of the endless strips 810a and 810b which, as a function of cleverly fitted final position detectors and a programmed control activated by the user, allows the horizontal linear (arrow H) and vertical (arrow V) movements of the roof components I to be orchestrated according to an operational cycle which consists in alternating the horizontal (arrow H) and vertical (arrow V) displacement times of the roof components I and according to pitches corresponding, on the one hand, to the spacing pitch "p" of two hooks 811a and 811b of one and the same chain for the vertical displacement (arrow V) of the endless strips 810a and 810b and of the roof components I associated with them and on the other hand, to a pitch at least equal to the width of the roof components I for the horizontal displacement (arrow H) of said roof components I activated by the motor-drive rollers 720a.

Page 22, amend the paragraph beginning at line 28 as follows:

When the connection means are dissociated, the roof components I of the roof fitted with the device of the invention can also offer the conventional advantages of the low profile cover of the roof T by allowing the half-open position through the articulation A of said roof components I (as shown in the drawing in figure 2) on the support edge S of the pool.

Page 23, amend the paragraph beginning at line 5 as follows:

According to a first preferential embodiment of the invention, the aforementioned connection means are constituted by the wings of arches 210 which, placed to project in the extension of the cover panels 100 in translucent material to ensure the sealed

partial covering of the juxtaposed roof components I of the roof T in the closed position, are fitted with a removable device for fastening to the arch 210 of the contiguous roof component I. Thus, as shown in more detail in the drawings in figures 10a and 10b, each of the aforementioned connection means of two contiguous arches given the reference 210r for the covered roof component and 210c for the covering roof component conventionally comprising projecting wings is constituted by a U-shaped profile 211 which, intended to conform to the shape of the rectangular lower profiles 212r and 212c of said two contiguous arches, is fastened to the rectangular profile 212r of the arches 210r of the covered roof component such that the rectangular profile 212c of the arch 210c of the covering roof component can be housed and inserted in the U-shaped profile 211 (cf. figure 10a) during the movement of lowering by articulation (reverse direction from the arrow A in figure 2) or by descent in the storage area 600 (reverse direction from the arrow V in figures 5 and 9) of the covering roof component in the lowered position and conversely disengage itself from said U-shaped profile 211 (cf. figure 10b) during the articulation movement in the direction of the arrow A of the same roof components to a half-open position or of the elevation movement in the direction of the arrow V to stack it in the storage area 600. Preferably, the upper part of the branch 211a of the aforementioned U-shaped profile 211 not integral with the arch 210r of the covered roof component is flared so as to facilitate the engagement with play of the rectangular lower profile 212c of the arch 210c of the covering roof component during its movement of lowering to a juxtaposed position. Likewise, the number and length of said connection means constituted by said U-shaped profiles are liable to vary.

Page 24, amend the paragraph beginning at line 23 as follows:

- in providing guide rollers or counter guide rollers distributed over the length of the pool so as to guide the horizontal displacement (arrow H) of the roof components I,